April 21, 1936. J. B. FLYNN 2,038,033

COMBINED ARM REST AND HANDLE

Filed June 28, 1934 3 Sheets-Sheet 1

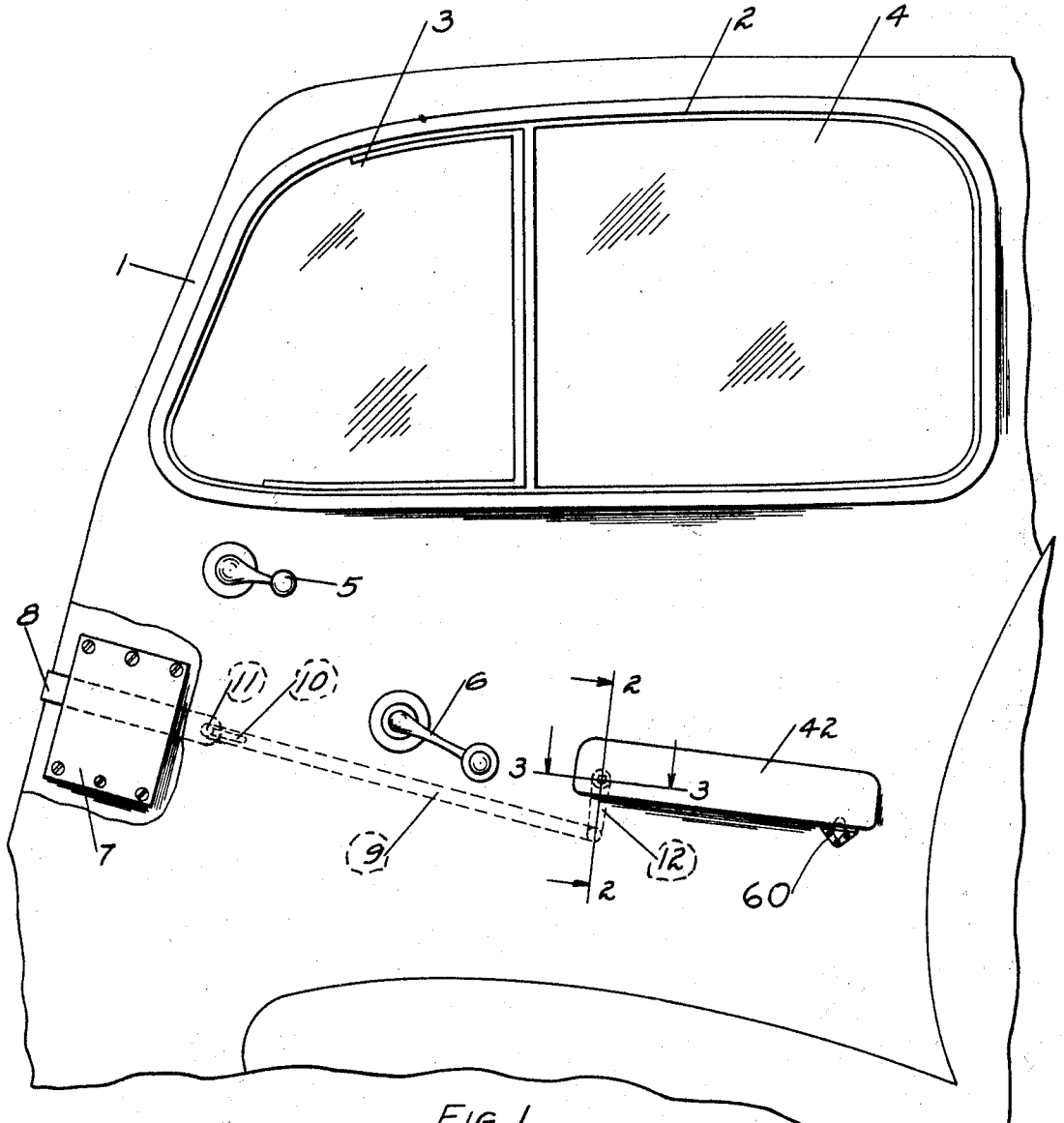


FIG. 1

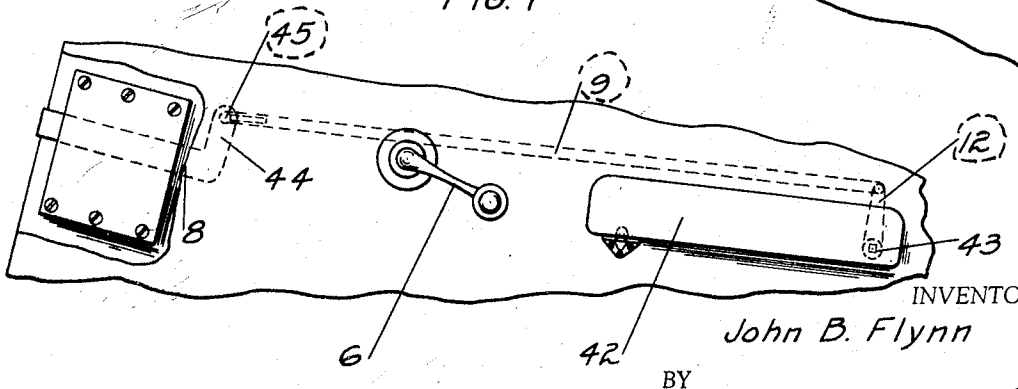


FIG. 6

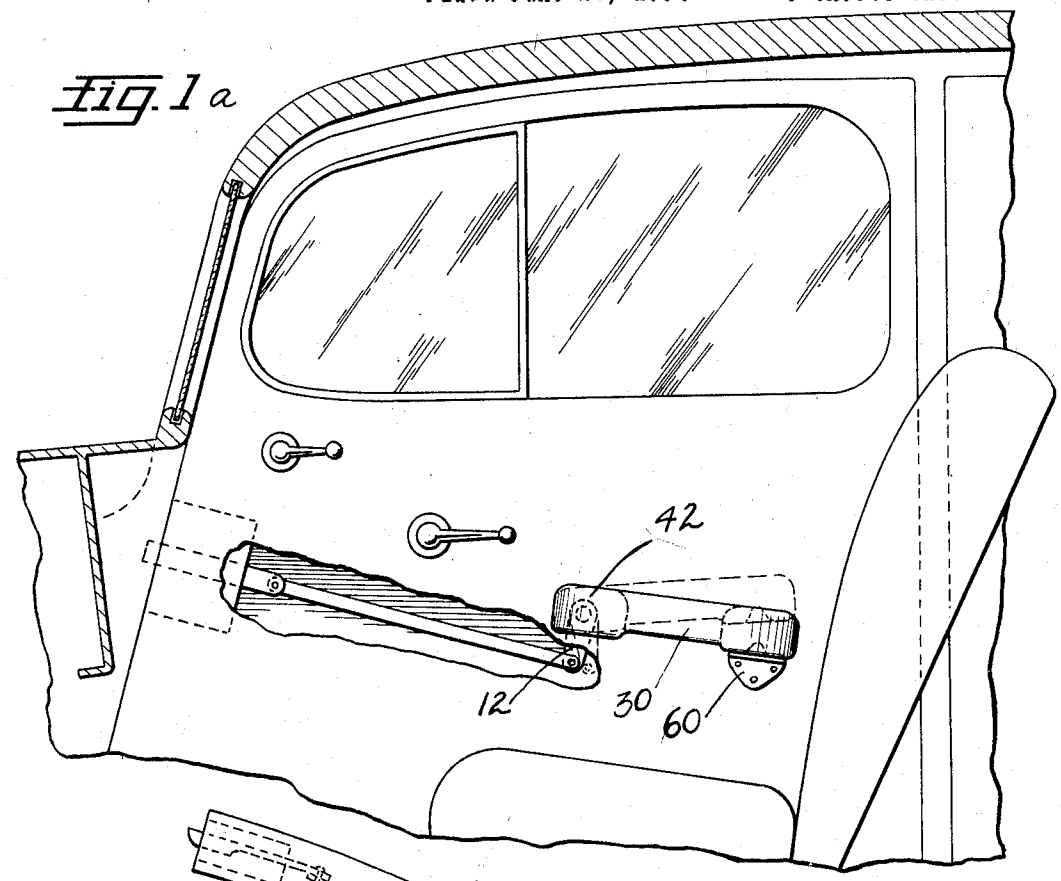
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Fig. 1 a



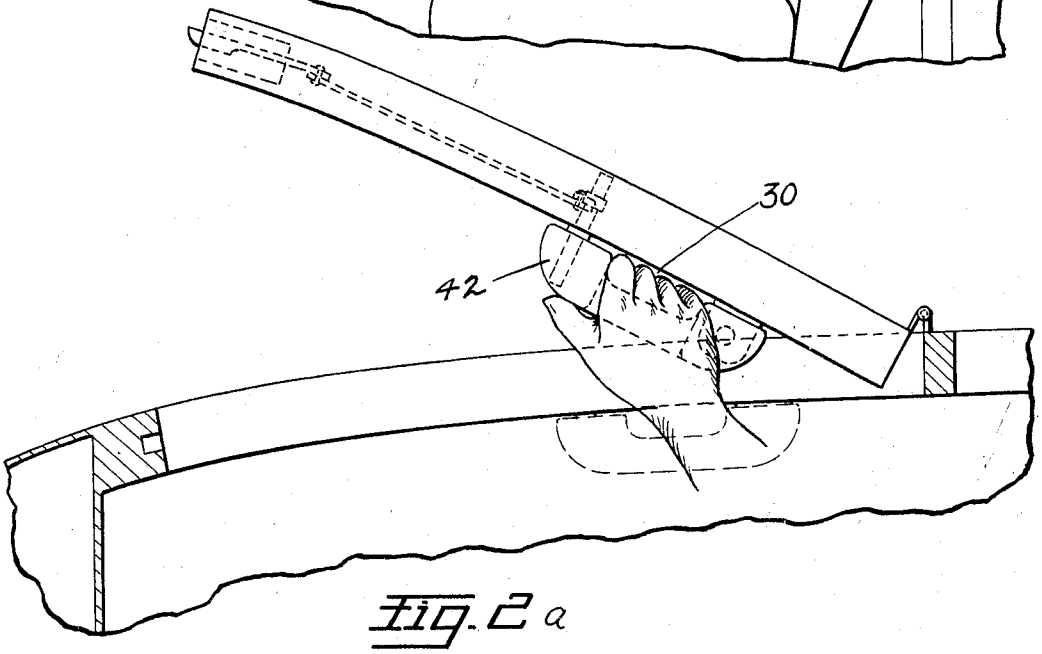


Fig. 2 a

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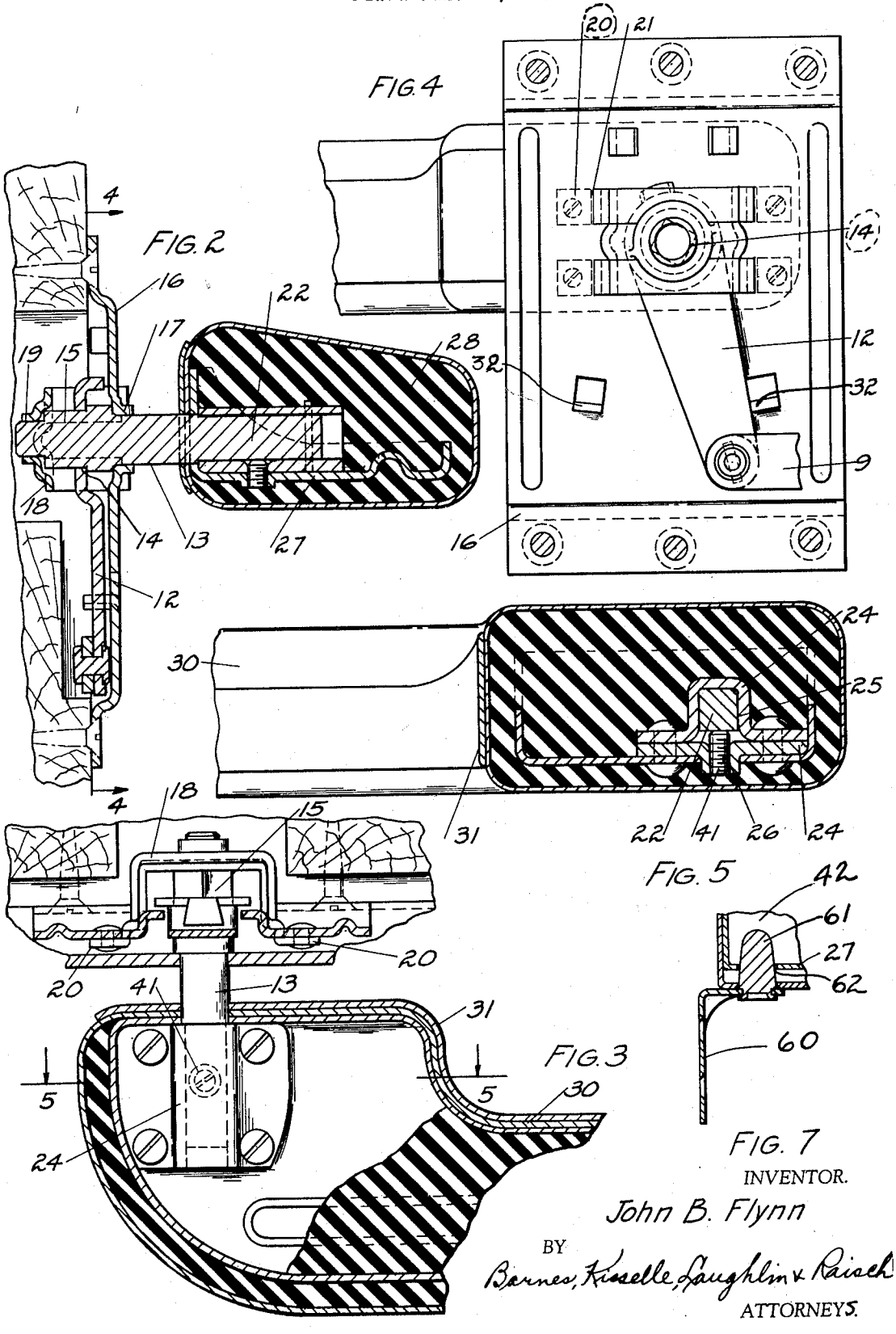


FIG. 7

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2,038,033

COMBINED ARM REST AND HANDLE

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Application June 28, 1934, Serial No. 732,880

16 Claims. (Cl. 296—44)

This invention relates to a combined arm rest and handle, and more particularly a combined arm rest and inside remote latch handle.

As is well-known, the Fisher no draft ventilation system has received wide-spread adoption in the automotive industry. In the Fisher no draft ventilation system the front door window opening is provided with a swinging panel and a vertically slidable panel both of which are provided with suitable regulators. These regulators are operated by separate regulator handles mounted on the inside of the door. In the old style set-up where the window opening is closed by a single vertically slidable panel only one regulator with a single regulator handle on the inside of the door is required. Thus the Fisher no draft ventilating system has added a handle on the inside of the door in an area already crowded with the regulator handle for the vertically slidable window panel and the inside remote latch handle.

This problem has been further complicated by the trend in the automobile industry to hinge the front door along its rear vertical edge to the center body pillar rather than along its front edge to the windshield pillar. This condition, along with the other factor of providing suitable room for operation of all the handles without conflict, has required the location of the remote handle in a position where it may interfere with the comfort of the passenger in the front seat, that is, where it may easily be bumped by the knee of the passenger. This problem has been rendered still more acute by the adoption of arm rests on the front doors. In locating the handle for the swinging panel ventilator, the handle for the vertically slidable panel regulator, the inside remote latch handle, and the arm rest, two problems arise, first, that of finding sufficient room on the inside of the door for each of the handles so that each may operate without conflicting with any other handle, and secondly, that of locating the handles so that they will not be in a position to be struck by the passenger or otherwise interfere with his bodily comfort.

It is an object of this invention to solve these problems and also to simplify the number of handles required on the inside of the door.

This invention contemplates the elimination of one of these handles by combining one of these handles and the arm rest into a single member which performs the functions of both arm rest and handle.

More particularly, the invention contemplates combining the arm rest and the inside remote latch handle in a single member which performs the functions of both arm rest and inside remote latch handle.

It is also an object of this invention to simplify the interior hardware arrangement of a vehicle body by combining the arm rest and pull-to handle into a single member.

Sometimes the driver catches his sleeve on the remote door handle which interferes with his driving. This invention contemplates the elimination of this interference with the driver's steering of the car.

In the drawings:

Fig. 1 is an inside view of the front door and seat of an automotive vehicle which also shows the combined arm rest and remote handle mounted on the door.

Fig. 1*a* is a sectional view of a vehicle body showing the arm rest mounted on the front door and showing in the dotted lines the position of the arm rest when the latch bolt is retracted.

Fig. 2 is a section along the line 2—2 of Fig. 1.

Fig. 2*a* is a sectional view illustrating the use of the arm rest as a pull-to in the closing of the door.

Fig. 3 is a section along the line 3—3 of Fig. 1.

Fig. 4 is a view along the line 4—4 of Fig. 2.

Fig. 5 is a section along the line 5—5 of Fig. 3.

Fig. 6 is a detail view showing a modified mounting of the combined arm rest and remote handle.

Fig. 7 is a detail showing the stop and locating dowel.

Referring more particularly to the drawings there is shown an inside view of a door, generally designated 1, having a window opening 2 which is provided with a Fisher no draft window assembly comprising a swinging panel 3 and a vertically slidable panel 4. The panel 3, which swings about an up and down axis, is controlled by a regulator (not shown) which is operated by the handle 5. The vertically slidable panel 4 may be raised and lowered by any well-known window regulator operated by the window regulator handle 6.

The door 1, in conformance to the present trend brought about by the acute inclination of the windshield, may be hinged along its rear vertical edge thus requiring the door latch, generally designated 7, to be mounted on the lock board adjacent the front edge of the door. The latch is provided with the usual reciprocating latch bolt 8 which has a lost motion connection with the front end of a retracting link 9 in the form of a slot 10 and pin 11.

Inasmuch as this invention contemplates the combining into a single member 42 of one of the

inside handles, for example, the remote handle, and the arm rest, it is proposed to retract the latch bolt through operation of the arm rest. This retraction of the latch bolt by manipulation of the arm rest may be done in numerous ways. Preferably the control of the latch bolt is effected by pivotal movement of the arm rest.

To this end a spindle 13 may be rotatably mounted upon the door in any suitable manner. Preferably this mounting takes the form of a plate member 16 which is arranged to be secured to the lock board by screws. The plate 16 is provided with a round flanged opening 17 which provides one bearing for the spindle 13. The second bearing for the spindle 13 is provided by the cup shaped member 18 having the round flanged opening 19 and the lugs 20 which are passed through the openings 21 in the plate 16 and bent over to fix the cup bearing member to the plate.

A lever 12 is mounted on the spindle 13. The lever 12 is provided with a square opening 14 which receives the square end 15 of the spindle 13. Thus the lever 12 is fixed to the spindle 13 and rotates with it. The rear end of the link 9 is pivotally connected to the lever 12.

The spindle 13 has a square portion 22 which projects inwardly of the body through a suitable opening in the door trimming and serves as a support for the arm rest.

The arm rest 42 is provided adjacent its front end with a socket for reception of the square end of the spindle. This socket takes the form of a pair of stamped members 24 riveted together forming a square opening 25 and secured by screws to the frame 27 of the arm rest. The socket member is provided with a tapped opening 26 for a set screw 41 for holding the arm rest on the spindle.

As shown, the arm rest comprises a stamped frame member 27 which may be molded in, or has otherwise suitably secured thereto, a soft rubber cushion covering 28. Since the member 42 is intended to serve both as an arm rest and a pull-to handle, therefore the inner face of arm rest 42, which is positioned adjacent the inside face of the door, is provided with a hand grip recess 30. This inner face of the arm rest, including the recessed portion, has secured thereto the plated wear plate 31.

As shown in the full lines of Fig. 1, the arm rest 42 is in the normal position in which it functions as an arm rest and at this time the latch bolt is projected into engagement with the striker plate. Preferably the arm rest is held in this position against further rotation in a clockwise or a downward direction by a stop 60 secured by screws to the lock board. The stop bracket 60 has riveted thereto the upstanding dowel 61 which engages an opening 62 in the arm rest and arm rest frame for centering the arm rest and taking the stress on the arm rest when used as a pull-to. When it is desired to retract the latch bolt, the arm rest is pivoted upwardly or in a counter-clockwise direction, as viewed in Fig. 1, thus causing the spindle 13 and the lever arm 12 to rotate in a counter-clockwise direction which through the link 9 retracts the latch bolt 8. A lug 32 is struck out of spindle support plate 16 and serves as a stop for lever 12 after the latch bolt has been retracted from engagement with the striker. Upon release the arm rest rotates back to normal position by action of gravity or a suitable spring may be provided to return the arm rest to normal. This spring may be mounted on the spindle 13 in a fashion such as that of the commonly used well-known coil spring mounted on the inside remote door handle spindle. The latch bolt 8 is projected by the usual latch bolt spring.

In Fig. 6 there is shown a modified form of the combined arm rest and remote handle. The modified form differs from the principal form of the invention only in that it is pivotally mounted adjacent its rear end as at 43. This pivotal mounting is the same as that above described except that the lever 12 extends vertically upward from the spindle 13 rather than downwardly as in the principal form. The latch bolt 8 is provided with an extension 44 which is pivotally connected to the link 9 as at 45. The extension 44 permits the link 9 to operatively interconnect the lever 12 with the bolt 8 without conflicting with the window regulator mechanism, and particularly the spindle upon which the regulator crank handle 6 is mounted. In this form of the invention the arm rest 42 is swung upwardly in a clockwise direction about its pivot 43 to retract the latch bolt.

I claim:

1. In an automotive vehicle body, mechanism mounted within a wall of the body and operable from the inner face of the body wall, and means mounted on the inner face of the body wall operatively connected with said mechanism for operating the said mechanism and serving as an arm rest.

2. In a vehicle body of the type having a seat for passengers and mechanism mounted within a wall of the body and operable from within the body, means mounted on the inner face of the body wall adjacent the seat and operatively connected with said mechanism for operating the same and serving as an arm rest.

3. In an automotive vehicle body, mechanism mounted within a wall of the body and operable from the inside of the body, and a combined handle and arm rest movably mounted on the inner face of a wall of the body and operatively connected with said mechanism for operating the same.

4. In an automotive vehicle body, mechanism mounted within a wall of the body and operable from the inside of the body, and a combined arm rest and handle pivotally mounted on the inner face of a wall of the body, and operative connections between the said mechanism and combined arm rest and handle.

5. In an automotive vehicle body, mechanism carried by a door operable from the inside of the body, and a combined arm rest and handle in the form of a member pivotally mounted adjacent one end on the door, and means operatively connecting the said member with the said mechanism whereby the said member may be swung upwardly about its pivot to operate the said mechanism.

6. In an automotive vehicle body, mechanism mounted within the door operable from the inside of the body, and a combined arm rest and handle in the form of a member pivotally mounted on the door, means operatively connecting the said member with the said mechanism whereby the said member may be swung upwardly about its pivot from a position where it serves as an arm rest to operate the said mechanism, and a stop for the said member for preventing downwardly swinging of the said member when in position to serve as an arm rest.

7. In an automotive vehicle body, a door latch

carried by a door, a combined arm rest and latch handle mounted on the inside of the body, and operative connections between the latch and the combined arm rest and handle whereby the latch may be operated by the said combined arm rest and handle.

8. In an automotive vehicle body having a door, a latch including a retractable bolt mounted on the said door, a combined arm rest and latch handle swingably mounted on the inside of the door and operative connections between the said member and the latch bolt whereby the said bolt may be retracted by swinging the combined arm rest and handle member.

9. In an automotive vehicle body having a door, a latch including a retractable bolt mounted on the said door, a combined arm rest and latch handle member movably mounted upon the inside of the door, operative connections between the said member and the latch bolt, the said combined arm rest and latch handle member being responsive to an upwardly directed force to retract the latch bolt, and stop means for preventing movement of the said member in response to a downwardly directed force applied thereto when in position to serve as an arm rest.

10. In an automotive vehicle body having a door, a latch including a retractable bolt mounted on the said door, a combined arm rest and latch handle member pivotally mounted upon the inside of the door, operative connections between the said member and the latch bolt, the said combined arm rest and latch handle member being responsive to an upwardly directed force to swing about its pivot and retract the latch bolt, and stop means for preventing swinging of the said member in response to a downwardly directed force applied thereto when in position to serve as an arm rest.

11. In an automotive vehicle body having a door, a latch including a retractable bolt mounted on the said door, a spindle rotatably mounted on the said door, a lever arm fixed on the said spindle, a link operatively connected to the latch bolt and the said lever arm, and a combined arm rest and latch handle member fixed on the spindle within the vehicle body whereby the said member in one position serves as an arm rest and may be swung by an upwardly directed force from this position to retract the latch bolt.

12. In an automotive vehicle body having a door, a latch including a retractable bolt mounted on the said door, a spindle rotatably mounted on the said door, a lever arm fixed on the said spindle, a link operatively connected to the latch bolt and the said lever arm, a combined arm rest and latch handle member fixed on the spindle within the vehicle body whereby the said member in one position serves as an arm rest and may be swung by an upwardly directed force from this position to retract the latch bolt, and a stop for retaining the said member in position to serve as an arm rest and for holding the said member in this position against a downwardly directed force such as occurs when the member is used as an arm rest.

13. In an automotive vehicle having a swinging door, an arm rest mounted on the inner face of the door, having a hand grip portion whereby the arm rest is also adapted to serve as a pull-to handle.

14. In an automotive vehicle having a swinging door, a member having a recessed hand grip portion mounted on the door whereby the said member serves both as an arm rest and pull-to handle.

15. In an automotive vehicle having a swinging door, a combined arm rest and pull-to handle mounted on the inside face of the door in the form of a member having a recess in its inner face adjacent the door to serve as a hand grip.

16. In an automobile body construction, a door having a locking bolt thereon, means for normally maintaining said bolt in locking position, and an arm rest mounted on the inside of said door and spaced inwardly from the inner surface of the door, said arm rest being normally horizontally disposed, operatively connected with said bolt and rotatable about an axis transverse to the general plane of said door to retract the bolt from its normal locking position.

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